

In the Claims:

Please amend the claims as follows:

1. (currently amended) A system (1) for determining the leakproofness of an object (2) having a first cavity (3), said system (1) comprising:

a closed chamber (4) having a second cavity (5), which chamber (4) is arranged to envelope said object (2) within said second cavity (5),

evacuating means (6) being arranged to lower the pressure inside one of said first cavity (3) and second cavity (5) with respect to the ambient pressure,

supplying means (7) for supplying a tracer gas (8) into the one of said cavities (3, 5) rendered the higher pressure, and

detecting means (9) being sensitive to said tracer gas (8), and characterized in, that said system (1) further comprises

introduction means (10) being arranged to introduce a transport gas other than said tracer gas (8) into the one of said cavities (3, 5) rendered the lower pressure, and wherein said evacuating means (6) is further being arranged to compress arriving gas to the ambient pressure of the chamber (4), and wherein said detecting means (9) being is arranged to communicate with the one of said cavities (3, 5) rendered the lower pressure via the evacuating means (6) and being is arranged for operation at the ambient pressure of said chamber (4), and wherein said tracer gas (8) being is hydrogen.

2. (currently amended) A The system (1) according to claim 1, characterized in, wherein

said introduction means (10) ~~being~~ is arranged to introduce the transport gas into the one of said cavities (3, 5) rendered the lower pressure during at least one controlled time interval.

3. (currently amended) A The system (1) according to claim 2, ~~characterized in~~, wherein said introduction means (10) ~~being~~ is arranged to introduce the transport gas in a continuous flow into the one of said cavities (3, 5) rendered the lower pressure during the at least one controlled time interval.

4. (currently amended) A The system (1) according to claim 2, ~~characterized in~~, wherein said introduction means (10) ~~being~~ is arranged to introduce a controlled amount of the transport gas into the one of said cavities (3, 5) rendered the lower pressure during a first part of the at least one controlled time interval.

5. (currently amended) A The system (1) according to claim 4, ~~characterized in~~, wherein said introduction means (10) is further ~~being~~ arranged to introduce a continuous flow of the transport gas into the one of said cavities (3, 5) rendered the lower pressure during a second part of the at least one controlled time interval.

6. (currently amended) A The system (1) according to claim 4, ~~characterized in~~, wherein said evacuating means (6) is further ~~being~~ arranged to evacuate tracer gas (8) from the one of said cavities (3, 5) rendered the lower pressure towards said detecting means (9) during an evacuation time interval.

7. (currently amended) A The system (1) according to ~~any of the preceding claims~~,
~~characterized in, that~~ claim 1, wherein the transport gas is air or nitrogen.

8. (currently amended) A The system (1) according to ~~any of the preceding claims~~,
~~characterized in, that~~ the system (1) further comprises claim 1, further comprising:

a first valve (19) located in an inlet (21) of the one of said cavities (3, 5) rendered the lower pressure and

a second valve (20) located in an outlet (22) of the one of said cavities (3, 5) rendered the lower pressure.

9. (currently amended) A The system (1) according to ~~any of the preceding claims~~,
~~characterized in, that~~ the system (1) further comprises claim 1, further comprising:

a filter (24) in an inlet (23) of the introduction means (10).

10. (currently amended) A The system (1) according to ~~any of the preceding claims~~,
~~characterized in, that~~ claim 1, wherein said first cavity (3) is rendered the lower pressure.

11. (currently amended) A The system (1) according to ~~any of claims 1-9, characterized~~
~~in, that~~ claim 1, wherein said second cavity (5) is rendered the lower pressure.

12. (currently amended) A The system (1) according to ~~any of the preceding claims~~,
~~characterized in, that~~ claim 1, wherein said object (2) is an aluminium aluminum wheel or an aluminium aluminum-alloy wheel.

13. (currently amended) A method for determining the leakproofness of an object (2) having a first cavity (3), said method comprising ~~the steps of~~:

enveloping said object (2) within a second cavity (5) of a closed chamber (4),

establishing by evacuating means (6) a lower pressure inside one of said first cavity (3) and second cavity (5) with respect to the ambient pressure,

supplying a tracer gas (8) by supplying means (7) into the one of said cavities (3, 5) rendered the higher pressure, and

detecting said tracer gas (8) in the one of said cavities (3, 5) rendered the lower pressure with detecting means (9) being sensitive to said tracer gas (8),

wherein characterized in, that the step of detecting said tracer gas (8) is preceded by a step of introducing a transport gas other than said tracer gas (8) into the one of said cavities rendered the lower pressure by introduction means (10) for transporting any tracer gas (8) in the one of said cavities (3, 5) rendered the lower pressure towards the detecting means (9) via the evacuating means (6), a step of compressing gas arriving at the evacuating means (6) to the ambient pressure of the chamber (4) and a step of pumping compressed gas to the detecting means (9) by the evacuating means (6), ~~that the step of~~ wherein detecting said tracer gas (8) comprises detecting at the ambient pressure of the chamber (4) and ~~that~~ wherein the tracer gas is hydrogen.

14. (currently amended) A The method according to claim 13, ~~characterized in, that the step of~~ wherein introducing the transport gas into the one of said cavities (3, 5) rendered the lower pressure is performed during at least one controlled time interval.

15. (currently amended) A The method according to claim 14, ~~characterized in, that the step of wherein~~ introducing the transport gas into the one of said cavities (3, 5) rendered the lower pressure during the at least one controlled time interval further comprises introducing the transport gas in a continuous flow for transporting tracer gas (8) in the one of said cavities (3, 5) rendered the lower pressure towards said detecting means (9).

16. (currently amended) A The method according to claim 14, ~~characterized in, that the step of wherein~~ introducing the transport gas into the one of said cavities (3, 5) rendered the lower pressure during the at least one controlled time interval further comprises introducing a controlled amount of transport gas during a first part of the at least one controlled time interval for compressing accumulated tracer gas (8) in the one of said cavities (3, 5) rendered the lower pressure in order to produce a short and concentrated pulse.

17. (currently amended) A The method according to claim 16, ~~characterized in, that the step of wherein~~ introducing the transport gas into the one of said cavities (3, 5) rendered the lower pressure during the at least one controlled time interval further comprises introducing the transport gas in a continuous flow during a second part of the at least one controlled time interval for transporting said pulse towards the detecting means (9).

18. (currently amended) A The method according to claim 16, ~~characterized in, that the method further comprises a step of further comprising:~~ evacuating transport gas by the evacuating means (6) from the one of said cavities (3, 5)

rendered the lower pressure during at least one controlled evacuation time interval for transporting said pulse towards the detecting means (9).

19. (currently amended) A The method according to ~~any of the preceding claims~~, characterized in, that the step of claim 13, wherein introducing a transport gas other than said tracer gas (8) into the one of said cavities rendered the lower pressure is preceded by a step of accumulating tracer gas (8) in the one of said cavities (3,5) rendered the lower pressure.

20. (currently amended) A The method according to ~~any of the preceding claims~~, characterized in, that the step of claim 13, wherein introducing a transport gas further comprises eliminating contaminants in the transport gas using a filter (24) before the introduction.

21. (currently amended) A The method according to ~~any of the preceding claims~~, characterized in, that the step of claim 13, wherein establishing a lower pressure inside one of said first and second cavities (3,5) comprises establishing the lower pressure in the first cavity (3).

22. (currently amended) A The method according to ~~any of claims 12-20, characterized in, that the step of claim 13, wherein~~ establishing a lower pressure inside one of said first and second cavities (3,5) comprises establishing the lower pressure in the second cavity (5).